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ABSTRACT

This document contains the oral and written statements of persons whose testimony was presented before a Congressional hearing on training lessons learned from recent military conflicts. Principal witness was Mark E. Gebicke, Director of Military Operations and Capabilities Issues, National Security and International Affairs Division, U.S. General Accounting Office. The testimony stated the following: (1) training of Active Duty forces is a never-ending process; (2) joint training and operations are receiving increasing emphasis; (3) simulation technology offers significant new ways to enhance training; (4) determining the right amount to spend on training is much more complex than it seems; and (5) training of Reserve component combat forces, particularly in the Army, poses a much greater challenge than the training of Active Duty forces. All of these issues are interrelated. (KC)

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SERVICE AND JOINT TRAINING: LESSONS LEARNED FROM RECENT CONFLICTS

HEARING

BEFORE THE

MILITARY FORCES AND PERSONNEL SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

SECOND SESSION

HEARING HELD
MARCH 10, 1994

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SERVICE AND JOINT TRAINING: LESSONS LEARNED FROM RECENT CONFLICTS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
MILITARY FORCES AND PERSONNEL SUBCOMMITTEE,
Washington, DC, Thursday, March 10, 1994.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room 2212, Rayburn House Office Building, Hon. Ike Skelton (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. IKE SKELTON, A REPRESENTATIVE FROM MISSOURI, CHAIRMAN, MILITARY FORCES AND PERSONNEL SUBCOMMITTEE

Mr. SKELTON. Three years ago, American military forces produced a stunning military victory in the deserts of Iraq and Kuwait. We won that war through military excellence. Excellence in the quality of men and women who served in the military. Excellence in the quality of weapons and material we furnished our men and women in uniform. Excellence in the quality of training for those men and women. Two years ago, the Department of Defense issued its final report on the conduct of the Persian Gulf War and noted that high quality training was one of the most important contributors to the preparedness of U.S. forces and subsequent success in the Gulf operation.

Forces that deployed to the Persian Gulf had already benefited from tough, realistic training that is the normal part of military life. After arriving in Saudi Arabia, they took advantage of the opportunity to train in theater. As one soldier once told me, the more you train in peacetime, the less blood you spill in war. In the desert, small unit training evolved into company and battalion level exercises. Our forces practiced and practiced and practiced virtually every aspect of defensive and offensive operations.

Units from each of the services were able to practice with one another in a fashion rarely attained at home. Desert Shield offered the services an ideal opportunity to undertake sustained joint and multi-service training. It paid off a few short months later.

This morning our topic for the hearing is military training and the lessons learned from recent conflicts. To help us in this effort, we have three individuals from the General Accounting Office: Mark Gebicke, Barry Holman and Charles Bonanno. They will share with the members of the subcommittee the knowledge that they have gained from the considerable work that they have done in this area. Allow me to direct the members' attention to the last two pages of today's statement. You will see the numerous reports

that GAO has done over the years on the matter of training. These men have contributed to those reports.

Gentlemen, I apologize in advance because I am hosting the guest chaplain for the floor this morning. I will relinquish this chair to our friend, Mr. Pickett, from Virginia, but I hope, like General MacArthur, to return. Jon Kyl.

STATEMENT OF HON. JON KYL, A REPRESENTATIVE FROM ARIZONA, RANKING MINORITY MEMBER, MILITARY FORCES AND PERSONNEL SUBCOMMITTEE

Mr. KYL. We know you shall, Mr. Chairman. Mr. Chairman, I join you in welcoming the witnesses here today. We heard testimony both this year and last from each of the service chiefs of staff claiming that U.S. military forces remain the best trained, most ready military organizations in the world. I do not doubt that that is technically true. But just being somewhat better than others is not the standard we have sought in the past. I am concerned that given the increasing strains put on the services by the combined effects of increasing world commitments and shrinking budgets and manpower, that this subcommittee and others periodically need to look behind such claims by the military, or we may run the risk of discovering to our deep regret that today's claim becomes tomorrow's hollowed boast.

Today's hearing, Mr. Chairman, is to help us understand the training challenges all the services face. Some of those challenges predate the end of the cold war. Others have emerged because of the new requirements of the post-cold war world. All remain difficult, requiring constant attention, time and resources to overcome. My fear remains that in a defense budget environment that continually asks the services to do more with less, training will inevitably suffer. I hope we can prevent that, Mr. Chairman, so I look forward to the testimony of our witnesses here today.

Mr. SKELTON. Thank you very much. Gentlemen, we look forward to your testimony. You may proceed as you desire.

STATEMENT OF MARK E. GEBICKE, DIRECTOR, MILITARY OPERATIONS AND CAPABILITIES ISSUES, NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION, U.S. GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY BARRY W. HOLMAN, ASSISTANT DIRECTOR, MILITARY OPERATIONS AND CAPABILITIES ISSUES, NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION, U.S. GENERAL ACCOUNTING OFFICE; AND CHARLES J. BONANNO, JR., ASSISTANT DIRECTOR, MILITARY OPERATIONS AND CAPABILITIES ISSUES, NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION, U.S. GENERAL ACCOUNTING OFFICE

Mr. GEBICKE. Thank you very much, Mr. Chairman. I thought what I would do this morning with your permission is give you about a 10 or 12 minute summary of my long statement, and then we would be available, of course, to respond to any questions.

Mr. SKELTON. Let any and all prepared statements be admitted into the record without objection.

Mr. GEBICKE. Thank you very much. We are very pleased to be here today to talk about lessons learned concerning military train-

ing and suggest some implications of those lessons for future training requirements. My comments today are going to focus around five key issues based on our prior work, which as you pointed out is attached to the long statement, and also on some current work that we have underway. Those five key points follow.

First, training of Active Duty forces is a never-ending process beset with challenges and lessons that continually repeat themselves. Second, joint training and operations are receiving increased emphasis. Third, simulation technology offers significant new ways to enhance training. Fourth, determining the right amount to spend on training, as Mr. Kyl pointed out, is much more complex than it seems. Fifth, training of Reserve component combat forces, particularly in the Army, poses a much greater challenge than the training of Active Duty forces.

All of these issues and the challenges facing each of them are interrelated. Training is a never-ending challenge. A few thoughts on that. An important lesson learned from the war in Vietnam as well as in previous wars was that well-trained forces were more likely to survive their first battles or missions and that their chances for surviving and minimizing casualties increased with each succeeding mission. Likewise, military leaders recognize that combat skills are perishable unless honed through frequent, realistic, and repetitive training.

These important lessons were built into the military's premier training programs such as the Army's National Training Center and the Air Force's Red Flag exercises where training is provided in CONUS in a very realistic battle environment. Such programs have been cited by military leaders as being key to the enhanced training of U.S. forces in recent years. Today, U.S. military forces are regarded as the best trained forces in the world. Nevertheless, our reviews have shown that our forces experienced common recurring training problems and weaknesses.

Many of these were documented in service reports on unit training exercises. The weaknesses typically relate to performance by lower level crews and units, the amount of rehearsals, battle staff planning and execution at the higher levels, and command and control. Our discussions with Army and Marine Corps leaders upon their return from the Gulf War documented that these problems were addressed in preparing for the Gulf War.

In addition, some officials and reports indicate that greater emphasis was needed on joint training. That was a real lesson learned in Desert Storm. Many of the problems and issues affecting training in the past still exist today. Recent documents about lessons learned from Army units participating in combat training exercises report the same recurring training problems. In some cases, the problems have been made even worse today because of the downsizing of the military forces and the changed national security environment which requires forces to be prepared for a broader array of potential missions.

Ongoing training programs continue to be adversely affected by personnel turbulence. This frequently affects units' personnel levels, training proficiency, and ability to build and maintain cohesion. The Army has about 25,000 personnel participating in various operations in over 60 countries. Such missions often require deploying

portions of units and can therefore disrupt unit cohesion and unit training cycles.

I speak now to my second point. As I mentioned earlier, the Gulf War highlighted shortcomings in joint operations and training. As a result, DOD has increased its focus on joint training at all levels within DOD. For example, the recent Ocean Venture 93 joint field exercise emphasized joint relationships to include refining joint doctrine, tactics, techniques, and procedures. The next Reforger exercise, which will take place this fall, is planning to provide an even greater emphasis on jointness.

JCS is sponsoring efforts to develop joint task lists, training standards, and doctrine publications. However, JCS officials indicate that it may be several years, indeed it might be the year 2000 before these efforts are completed. One of the more significant actions taken concerning joint training was the October 1993 creation of USA Command. This unified command is responsible for the joint training and packaging of most military forces stationed in the United States for overseas deployments to support other warfighting commanders-in-chief.

My third point is that simulation technology offers the potential to revolutionize training. The services have traditionally used hundreds of training devices to model or simulate various aspects of combat, weapons systems, and terrain in support of training activities. Computer simulations are growing in their importance and potential to enhance the effectiveness and efficiency of training while reducing training-related costs. Now, of course, there is a considerable capital investment up front required to provide simulation equipment and software.

Training experts believe, however, that future developments in simulation technology will revolutionize military training. Computer simulations are still evolving and some have limitations in replicating actual systems and the battlefield. However, they are increasingly being recognized as having the capability to provide important training opportunities that are not always feasible in traditional exercises. Computer-simulated exercises permit more concentrated and repetitive training for battle staff in planning and command and control operations. We have reported the importance of computer simulations but have emphasized the challenges inherent in managing this technology cost effectively.

The success of simulations has led to growing recognition that the military needs to address its use of simulation technology as an important complement to traditional field training. However, we have found that commanders lack guidance and training for making the most effective use of simulations on an ongoing basis. Further, insufficient emphasis has been placed on identifying the most appropriate mix of advanced simulation technology and traditional field training. Computer-simulation technology also offers much potential for enhancing joint training.

This potential has been recognized by the joint staff which decided to establish a joint war-fighting center in the Tidewater, VA, area, to facilitate joint doctrine development and provide simulation support to joint exercises.

My fourth point deals with the challenge of identifying adequate funding for training. Each year, as DOD presents its training fund

requirements to the Congress, it does so in terms of aggregate tank miles, flying hours, and steaming days. This can create the impression of some uniformity in training tempos that our work has shown just does not exist. Our previous reviews of Army training showed that training funds were not allocated evenly to units and that greater priorities were accorded units preparing to train at the National Training Center.

We have seen little to indicate that this situation has changed. Additionally, we have found that when unit training funds are allocated, commanders at various echelons often make tradeoffs between training and other needs and sometimes reallocate funds to meet other needs. We have also seen as recently as last year that increased operating tempos associated with unanticipated contingency operations, such as what we participated in Somalia, can result in the use of training funds for other purposes. We cannot precisely measure the impact such variance in training funds have had on overall readiness levels. However, such variances do create an unevenness in the training of combat units.

That is they create peaks and valleys in training and unit proficiency. At the same time, however, even with variances and allocations of training funds, there is at the present no discernible impact on the commanders' assessment of the units' readiness. I would not conclude that more monies were allocated to training than were required to maintain readiness. A number of factors may need to be considered in that particular equation.

Based on our ongoing work, there are two points that I would like to make at this time. One relates to the need to determine the most appropriate mix of simulation and traditional training including how the use of advanced simulation technology can offset or reduce funding requirements associated with a more traditional funding of training. The second point is the amount of funding required to ensure readiness is much more complicated than simply the statements of tank miles, flying hours, and steaming days. This issue is apt to become much more complicated in the future as joint training is emphasized and decisions must be made on how to allocate very, very scarce training funds.

My final point and possibly the most significant is related to the training challenges facing Reserve components. The Reserve Forces played a vital role during the Gulf War, particularly in the combat support arena, and are expected to play an increasingly important role in future military operations. According to the report on the Bottom-Up Review, one important role for the Army National Guard combat brigades is to provide forces to supplement active divisions in a second major regional contingency.

During the Gulf War, Army National Guard combat brigades had significant training-related readiness problems. Although the Army structured some of its divisions to be rounded out by Guard brigades, none of the three roundout brigades that were activated were actually deployed. Instead of deploying these brigades, the Army substituted other active Army brigades.

The active Army's evaluation of the brigades activated for but not deployed to the Gulf War revealed that many soldiers were not completely trained to do their individual jobs. Many tank and Bradley Fighting Vehicle crews were not proficient in gunnery

skills, and many commissioned and non-commissioned officers had not completed required leadership training.

Now the challenges facing Reserve components, particularly large ground formations, such as armor and mechanized infantry brigades, are compounded by training limitations. For example, as you know, Reserve Forces generally train only about 39 days a year and a considerable portion of this time is spent on administrative matters or in traveling long distance to reach the training ranges. The Army has several initiatives underway to address training and readiness problems in the Guard brigades. Although we believe the initiatives are a major step in the right direction, early results indicated that problems are a long way from being resolved.

The most far-reaching initiative is an initiative called Bold Shift. This project, which was initiated in September 1991, is designed to focus training for combat maneuver units during peacetime at the individual, crew, and platoon levels. Annual training data for 1992 showed that none of the Guard combat brigades had reached premobilization training and readiness goals. It is too soon to determine based on just one year's worth of data what impact the Bold Shift program might have in the longer term, but we are going to be continuing to watch that.

We remain very concerned that the Army has not solved the problem of adequately training reservists in their individual jobs. This training is designed to teach reservists the basics of the job they are expected to do in their units. Soldiers who are not adequately trained in the individual duty positions cannot be expected to perform effectively as crew members. Likewise, untrained crews degrade the proficiency of platoons. We are going to continue to watch the efforts of the Army and the Marine Corps very carefully.

In summary, let me reiterate my five points. Despite the widely shared views that today's military forces are the best trained forces in the world, some common recurring weaknesses reinforce the need for a continuing emphasis on repetitive training if U.S. forces are to be prepared to fight and win the first battle of the next war and minimize casualties. Although major efforts have been initiated to address some long-standing gaps in joint training, many actions have yet to be completed, and many of those are way out on the horizon.

Simulation technology offers important potential for enhancing training at reduced cost. But the most appropriate mix of simulation and more traditional training needs to be better defined. Preserving adequate funding for training is essential, but articulating precisely how much is needed is very, very difficult, and finally the training of Reserve combat forces poses even greater challenges than those faced by the active forces.

Mr. Chairman, this completes my summary of my long statement and we would be very happy to respond to any questions that you may have at this time.

PREPARED STATEMENT OF MARK E. GEBICKE

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to highlight for you and Members of the Subcommittee a number of "lessons learned" concerning military training and suggest some implications of those lessons for future training requirements. My testimony is based on our prior reports, as well as work underway to ensure the currency of issues being raised.

My comments are framed around five key issues.

-- Training of active duty forces is a never-ending process beset with challenges and lessons that continually repeat themselves.

-- Joint training and operations are receiving increased emphasis, and some important new initiatives are underway.

-- Simulation technology offers significant new opportunities for enhanced training.

-- Determining the right amount to spend on training is much more complex than it appears on the surface.

-- Training of reserve component combat forces, particularly in the Army, poses a much greater challenge than the training of active

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A list of pertinent GAO reports is included as appendix I.

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duty forces.

All of these issues and the challenges facing each of them are interrelated.

TRAINING IS A NEVER-ENDING CHALLENGE

An important lesson learned from the war in Vietnam, as well as from historical analyses of previous wars, was that well-trained forces were more likely to survive their first battles or missions and that their chances for surviving and minimizing casualties increased with each succeeding mission. Likewise, military leaders recognize that combat skills are perishable in peacetime unless honed through frequent, realistic, and repetitive training. These important lessons were not lost on the services in developing their premier training programs, such as the Army's National Training Center (NTC) and the Air Force's Red-Flag exercises, where training is provided in a very realistic combat environment. Such programs have been cited by military leaders as being key to the enhanced training of U.S. military forces in recent years. These programs enabled military leaders in the late 1980s, and in August 1990 when Iraq invaded Kuwait, to express the view that U.S. military forces were better prepared than ever to fight and win in combat.

Common Recurring Weaknesses

Today, U.S. military forces are regarded by many people as the best trained forces in the world. Yet, despite indicators of better trained forces than ever in recent years, our reviews have shown common recurring training weaknesses and areas in which increased training emphasis was needed--as documented in service reports summarizing unit training exercises, such as those at the Army's NTC. Areas where improvements were needed included command and control, battle staff planning and execution at the higher levels, and performance by crews and units at the lower levels. Many weaknesses were related to inadequate battlefield planning, development and use of intelligence data, reconnaissance, maintenance of communications, and conducting rehearsals.

In the late 1980s and early 1990s we found that various constraints on Army training--such as high turnover among key personnel, time constraints, and available training funds--made it difficult to sustain a high level of unit proficiency. Our reviews showed that (1) the amount of maneuver training at home stations was limited because of funding constraints and (2) units closest to deploying for training exercises at the NTC received priority funding.

Before the onset of the Gulf War, NTC officials and other military trainers stated that not enough repetition in training was being done at lower echelons and that training, involving individuals and

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small units, needed more command attention on an ongoing basis. Our analysis of Army and Marine Corps preparations for ground operations in the several months preceeding Operation Desert Storm indicated (1) the extent of recent unit training varied widely among Army and Marine Corps units notified to prepare for deployment to the Gulf, and (2) in preparing for ground operations, the Army and Marine Corps emphasized repetitive individual and small unit training, battle drills, and rehearsals.

In preparing for the ground war in the Persian Gulf, the Army and Marine Corps devoted significant attention to the training of battle staffs through the use of battle drills and wargaming activities. Both services devoted extensive efforts to developing, reviewing, refining, and practicing battle drills and tactical standard operating procedures. Battle drills are used to train smaller units such as platoons by practicing rapid reactions to orders and possible enemy actions. Similar trained responses, normally referred to as standard operating procedures, were practiced by higher echelons. Wargaming exercises ranged from informal give-and-take among senior leaders and staffs regarding proposed operating plans to the use of computer simulation technology to plan, test, and revise potential courses of action. These exercises were considered by many military leaders as key to their success.

In other reviews we conducted during the Gulf War, or shortly thereafter, we found several training areas where deficiencies existed, including chemical warfare, medical readiness, and support forces. All of these areas required work-arounds and shoring up to prepare for the Gulf War--it was fortuitous that U.S. forces had the several months to build up before the onset of ground operations.

Our extensive discussions with Army and Marine Corps leaders upon their return from the Gulf War documented a number of lessons learned that have implications for future training needs. They stated that the emphasis on repetitive individual and small unit training should continue and the emphasis on battle staff training should increase. They also noted weaknesses in the command and control of support organizations in a combat environment due to limited training with combat forces in peacetime. Some officials and reports indicated that greater emphasis was needed on joint training, including planning; coordination; interoperability; and common understanding of procedures, processes, and terminology, and that joint training should not just be limited to large-scale exercises, but include contingency operations of varying sizes.

In our review of naval air operations during the Gulf War we identified joint operational and training problems. Some Navy aviation units were not familiar with the Air Force's system for receiving and transmitting aircraft mission orders and did not

receive the advanced training necessary to familiarize them with the system and the other services' tactics, procedures, and weapon capabilities. Also, the Navy lacked equipment to receive and transmit aircraft mission orders, which limited its flexibility in organizing and responding to air taskings. A key contributor to these problems was limited joint training in peacetime.

Where Does Training Stand Today?

Until now, I've given you a largely historical perspective on training. I would be remiss if I didn't try to add a more recent perspective. Many of the problems and issues affecting training in the past still exist today. In some cases the problems have been exacerbated by the downsizing of military forces and the changed national security environment, which requires forces to be prepared for a broader array of potential missions.

In 1993 documents about lessons learned from units participating in combat training exercises at the NTC in California and its counterpart in Germany, the Army reports the same recurring training problems that we had previously identified. For example, a recent paper dealing with Army training in Germany focused on the need for improvements in battle staff planning and execution and greater emphasis on rehearsals. It also noted that units often fail to integrate combat service support into task force planning and that task force commanders were so focused on the tactical

aspect of operations that they were seldom, if ever, involved with logistics. In addition, an Army report on Operation Restore Hope in Somalia from December 1992 to May 1993 cited the need for continued training in joint task force operations; improvements in joint logistical operations; and improvements in cross-service training to support air medical evacuations.

Now, as much as, if not more than, in previous years, ongoing training programs are being adversely affected by personnel turbulence--which frequently affects units' personnel levels, training proficiency, and ability to build and maintain cohesion in training. Regular combat training routines are also affected today by the operating rates of equipment (commonly referred to as operating tempos) associated with deployments for operations other than war. For example, various officials have noted that the use of air transports for operational missions greatly exceeds the funded rate--this can create difficulties in completing planned training exercises.

The Army reported recently that it had approximately 25,000 personnel participating in a variety of operations in over 60 countries. According to the Army, this figure is significantly higher than that prior to the end of the Cold War. Such missions often require deploying portions of units and can therefore disrupt unit cohesion and unit training cycles. In addition, Air Force officials indicate that while aviation units may fly many missions

in support of contingency missions, the type of flying done for those missions does not necessarily provide training needed to maintain combat proficiency in certain areas. These situations indicate the existence of a more challenging environment today in which to develop and maintain warfighting training proficiency.

Currently, several of our reviews are focused on a variety of training issues. These issues include personnel levels, the allocation of training funds, and the effect that U.S. participation in non-traditional roles such as U.N. peace operations has on the services' training for traditional wartime missions and on individuals' transition back to training for war.

INCREASED EMPHASIS IS BEING PLACED ON JOINT TRAINING

Our work in the late 1970s and mid-1980s pointed out the need for improved management of joint training exercises, including Joint Chiefs of Staff (JCS) involvement in the planning, review, and oversight of these exercises. In retrospect, a number of military officials are recognizing today that so-called joint training in previous years was less joint than it appeared to be on the surface. For example, the Return of Forces to Germany (REFORGER) exercises were largely Army training exercises, even though there was some participation from the Air Force. In addition, despite the name Joint Readiness Training Center, this facility is primarily devoted to Army training.

As I mentioned earlier, the Gulf War highlighted shortcomings in, and the need for greater emphasis on, joint operations and training. As a result, DOD has increased its focus on joint training at all levels within DOD. For example, "Ocean Venture 93," a U.S. Commander-in-Chief, Atlantic Command-sponsored, joint field training exercise with a Navy Joint Task Force Commander and an Army Deputy Task Force Commander, had as an objective exercising joint relationships and refining joint doctrine, tactics, techniques, and procedures.

Also, U.S. military officials in Germany have stated that the next REFORGER exercise, scheduled for fall 1994, will provide a greater emphasis on jointness than ever by having a designated joint task force commander and the active participation of members from each of the services. Additionally, joint and individual staffs of some warfighting commanders-in-chief told us they were looking to restructure exercises to provide a greater focus on joint operations. We expect to review some of these exercises to determine the changes being made.

JCS is sponsoring efforts to develop joint task lists and standards for joint training and is overseeing efforts to develop a number of joint doctrine publications. However, JCS officials indicate that it may be several years before the results of these efforts are all in place.

One of the more significant actions taken concerning joint training was the October 1993 designation of the U.S. Atlantic Command as a unified command responsible for the joint training and "packaging" of most military forces stationed in the United States for overseas deployments to support the other warfighting commanders-in-chief.

We have a major review of joint training underway, at this Subcommittee's request. As part of that review we are examining the initial efforts of the U.S. Atlantic Command to provide for joint training. We are also examining the roles of the JCS Chairman and combatant commanders in the process of planning and overseeing joint training and the use of simulation technology to facilitate some of that training.

SIMULATION TECHNOLOGY OFFERS THE POTENTIAL TO REVOLUTIONIZE TRAINING

The services have traditionally used hundreds of training devices to model or simulate various aspects of combat, weapon systems, and terrain in support of training activities. Training devices range from simple simulated explosives and plywood terrain boards that replicate the terrain of a given battle area to highly technical, sophisticated laser gunnery systems that simulate the effects of weapons firing and computer-supported, multimillion dollar aircraft simulators. Additionally, computer simulation models are used to "drive" training exercises--that is, they often provide a map-based view of the battlefield, viewed on a computer monitor, and require

battle commanders and their staffs to plan, coordinate, and execute their battle plans against an opposing force.

Computer simulations are growing in their importance and potential to enhance the effectiveness and efficiency of training while reducing training-related costs. Of course, a significant capital investment up-front is required. Further, technology developments in the 1990s are beginning to provide opportunities to integrate a variety of dissimilar weapon system simulators and wargaming simulations among the services and increase the potential to support joint training. Training experts believe these developments will revolutionize military training.

Computer simulations are still evolving and have some limitations in replicating actual systems and the battlefield. However, they are increasingly being recognized as having the capability to provide important training opportunities that are not always feasible in traditional exercises. Computer-simulated exercises permit more concentrated and repetitive training for battle staff in planning and command and control operations. We have reported the importance of computer simulations but have emphasized the challenges inherent in managing this technology cost-effectively.

In the past, large-scale field exercises, like REFORGER, deployed large numbers of forces, were often time-consuming, and often produced significant downtime for lower echelon units such as

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platoons and companies. The Army, which has had a lead role in exploiting advanced simulation technology, has increasingly come to rely on this technology for recent REFORGER exercises--at significant savings in cost, with fewer deployed forces, and a sharper focus on training for higher echelon battle staffs.

A significant contribution to battle staff training and preparation for ground operations in the Gulf War was made by the Army's Battle Command Training Program (BCTP), a simulation wargaming program designed to train division- and corps-level battle staff.

The success of BCTP and other simulations has led to growing recognition that the military needs to increase its use of simulation technology as an important complement to traditional field training. However, we have found that commanders lack guidance and training for making the most effective use of simulations on an ongoing basis. Further, insufficient emphasis has been placed on identifying the most appropriate mix of advanced simulation technology and traditional field training.

Computer simulation technology also offers much potential for enhancing joint training. This potential has been recognized by the Joint Staff, which decided to establish a Joint Warfighting Center in the Tidewater, Virginia, area (near the U.S. Atlantic Command) to facilitate joint doctrine development and provide simulation support to joint exercises.

IDENTIFYING ADEQUATE FUNDING FOR TRAINING IS A CHALLENGE

Each year, as DOD presents its training fund requirement to Congress, it does so in terms of aggregate tank miles, flying hours, and steaming days. This can create the impression of some uniformity to training tempos that our work in the past has shown does not exist. Our previous reviews of Army training showed that training funds were not allocated evenly to units, and that greater priorities were accorded units preparing to train at the NTC. We have seen little to indicate that the situation has changed.

Additionally, we have found that commanders at various echelons often make tradeoffs between training and other needs, and sometimes reallocate portions of those funds to meet other needs. We have also seen, as recently as last year, that increased operating tempos associated with unanticipated contingency operations can result in the use of training funds for other purposes.

We cannot precisely measure what impact such variances in training funds have had on overall readiness levels. However, such variances do create an unevenness in the training of combat units, that is, they create peaks and valleys in training and unit proficiency. At the same time, however, we also noted in the past that, even with variances in allocations of training funds, there appeared to be no discernable impact on commanders' assessments of

the units' readiness. I would not deduce from the commanders' assessments that more monies were allocated to training than were required to maintain readiness; a number of factors may need to be considered in the equation. We have a review underway currently to examine trends in the allocation of training funds and trends in the reallocation of these monies for other purposes.

While I would not want to prejudge the results of our ongoing work, there are a couple of points I can make at this time. One relates to the need to determine the most appropriate mix of simulation and traditional training; this is very important in terms of helping to determine to what extent the use of advanced simulation technology helps to offset or reduce funding requirements associated with more traditional training. The second point I would make is that how much funding is required to ensure readiness is much more complicated than simple statements of tank miles, flying hours, and steaming days. This issue is apt to become more complicated in the future, with a growing emphasis on joint training and questions of how best to allocate scarce training funds between individual service and the growing area of joint training.

CHALLENGES FACING RESERVE COMPONENT TRAINING

Until now, my focus on training has dealt with the active component forces. I believe that I should also touch briefly on the subject of training of reserve forces, which may be more critical today

than at any time in the past. These forces played a vital role during the Gulf War, particularly in the combat support arena, and are expected to play an increasingly important role in future military operations as DOD downsizes. Even though the size of both active and reserve forces is decreasing, the reserves will comprise a larger portion of the projected force structure. For example, from fiscal years 1989 to 1994, the percent of reserves in the Army will actually increase from 50 to 55 percent. It should also be noted that for some functions reserve forces provide all or nearly all of a service's capability. Examples include the Army's civil affairs and water purification activities and the Air Force's weather reconnaissance. According to the Report on the Bottom-Up Review, one important role for the Army National Guard combat brigades is to provide forces to supplement active divisions, should more ground combat power be needed to fight a second major regional contingency.

Challenges facing reserve components are even greater than those faced by active forces. It became apparent during the Gulf War that Army National Guard combat brigades had significant training-related readiness problems. Although the Army structured some of its divisions to be rounded out by Guard brigades, none of the three roundout brigades that were activated for the crisis were deployed. Instead of deploying these brigades with their assigned divisions, the Army substituted other active Army brigades.

Proficiency in leadership and individual and crew skills are at the heart of the Army's building-block approach to training. Soldiers must be proficient in basic skills before they can be expected to achieve proficiency in the more complex skills at higher echelons such as companies and battalions. However, the active Army's evaluation of Guard combat brigades activated for the Gulf War revealed that (1) many Guard soldiers were not completely trained to do their jobs, (2) many tank and Bradley Fighting Vehicle crews were not proficient in gunnery skills, and (3) many commissioned and noncommissioned officers (NCOs) in the National Guard had not completed required leadership training. As a result of these problems, the training conducted by the Guard brigades after their mobilization sought to achieve proficiency in many skills for the first time. In contrast, the active Army brigades that replaced them were able to concentrate their training on honing individual and collective skills that soldiers and leaders already possessed.

The challenges facing reserve components, particularly large ground formations such as armor and mechanized infantry brigades, are compounded by a difficult training environment. Reserve forces generally train only about 39 days each year, and a considerable portion of this time can be taken up by administrative matters or in traveling long distances to reach training ranges. Available training days in the Army National Guard include a 2-week period during which units spend at least 7 days in a tactical field environment. This training affords the Guard the best--and for

many units the only--opportunity to accomplish sustained mission training under realistic conditions.

Initiatives to Improve National Guard Training

The Army has several initiatives underway to address training and readiness problems in its Guard brigades. Although we believe the initiatives are a major step in the right direction, early results indicate that problems are a long way from being solved.

As a result of the Gulf War experience and subsequent legislation, such as the Army Guard Combat Reform Initiative, the Army completely revamped its strategy for training Guard brigades. The most far-reaching initiative is called Bold Shift. This project, initiated in September 1991, is designed to focus training for combat maneuver units during peacetime at the individual, crew, and platoon levels. It includes initiatives to (1) provide training to soldiers who are not currently qualified for their assigned jobs and expedite leadership training for officers and NCOs and (2) involve active Army officers and NCOs to a greater extent in training reservists.

The rationale for Bold Shift is that by focusing the limited amount of training time available to reservists during peacetime on the fundamental building blocks of Army training, reservists will be better prepared to develop the skills required at higher echelons

during some period of post-mobilization training. The Army currently estimates that about 90 days of post-mobilization training will be required for the reserve brigades to achieve proficiency. However, this estimate is based on the assumption that the brigades have achieved proficiency at the individual soldier, crew, and platoon levels during peacetime. It is not clear what amount of post-mobilization training time will be available to focus on joint training.

Annual training data for 1992, the latest annual data that the Army has compiled since Bold Shift started, showed that none of the Guard combat brigades had reached pre-mobilization training and readiness goals. It is too soon to determine, based on one year's data, what impact the Bold Shift program will have in the longer term.

However, we are still concerned that the Army has not solved the problem of adequately training reservists in their individual jobs, or military occupational specialties (MOS). This training is designed to teach reservists the basics of the jobs they are expected to do in their units. Until this training is completed, a reservist is not qualified in his or her job. Lack of MOS qualification is a problem that takes soldiers away from their units to attend school and impedes collective training at each higher echelon. Because of the building-block nature of Army training, having soldiers who are adequately trained in their

individual jobs is at the heart of the Guard's ability to achieve proficiency at higher echelons. Soldiers who are not adequately trained in their individual duty positions cannot be expected to perform effectively as crew members. Likewise, untrained crews degrade the proficiency of platoons. In 1992, about 30 percent of reservists did not attend annual training with their units. Many were attending prescribed individual training courses.

Primary causes of MOS qualification problems include high attrition and the inability of most units to recruit their authorized number of soldiers. Although the Army has initiated efforts designed to address the MOS problem, it is clear that solutions are difficult and may take a long time. We currently have a review underway of the Guard brigades' progress towards meeting pre-mobilization readiness and training goals. As part of that review we plan to compare the Army's and the Marine Corps' use of active duty personnel to advise the reserves.

SUMMARY

In closing, let me reiterate the key points.

-- Despite the widely shared view that today's military forces are the best trained forces in the world, some common recurring weaknesses reinforce the need for a continuing emphasis on repetitive training if U.S. forces are to be prepared to fight

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and win the first battle of the next war and minimize casualties.

-- Although major efforts have been initiated to address some long-standing gaps in joint training, many actions have yet to be completed.

-- Simulation technology offers important potential for enhancing training at reduced costs, but the most appropriate mix of simulation and more traditional training needs to be better defined.

-- Preserving adequate funding for training is essential but articulating precisely how much is needed is difficult.

-- The training of reserve combat forces poses even greater challenges than those faced by the active forces.

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Mr. Chairman, this concludes my prepared statement. I would be happy to respond to any questions that you or Members of the Subcommittee may have.

APPENDIX I

KEY GAO REPORTS RELATED TO TRAINING

Operation Desert Storm: Problems With Air Force Medical Readiness (GAO/NSIAD-94-58, Dec. 30, 1993).

Army Training: Prioritizing and Following Up on Lessons Learned Should Minimize Recurring Weaknesses (GAO/NSIAD-93-231, Sept. 16, 1993).

Army Training: Commanders Lack Guidance and Training for Effective Use of Simulations (GAO/NSIAD-93-211, Aug. 23, 1993).

Medical Readiness Training: Limited Participation by Army Medical Personnel (GAO/NSIAD-93-205, June 30, 1993).

Operation Desert Storm: Improvements Required in the Navy's Wartime Medical Care Program (GAO/NSIAD-93-189, July 28, 1993).

Naval Air Operations: Interservice Cooperation Needs Direction From Top (GAO/NSIAD-93-141, May 19, 1993).

Simulation Training: Management Framework Improved, but Challenges Remain (GAO/NSIAD-93-122, May 10, 1993).

Chemical and Biological Defense: U.S. Forces Are Not Adequately Equipped to Detect All Threats (GAO/NSIAD-93-2, Jan. 26, 1993).

Army Training: Replacement Brigades Were More Proficient Than Guard Roundout Brigades (GAO/NSIAD-93-4, Nov. 4, 1992).

Operation Desert Storm: War Offers Important Insights Into Army and Marine Corps Training Needs (GAO/NSIAD 92-240, Aug. 25, 1992).

Operation Desert Storm: Full Army Medical Capability Not Achieved (GAO/NSIAD-92-175, Aug. 18, 1992).

Operation Desert Storm: Army Had Difficulty Providing Adequate Active and Reserve Support Forces (GAO/NSIAD-92-67, Mar. 10, 1992).

National Guard: Peacetime Training Did Not Adequately Prepare Combat Brigades for Gulf War (GAO/NSIAD-91-263, Sept. 24, 1991).

Chemical Warfare: Soldiers Inadequately Equipped and Trained to Conduct Chemical Operations (GAO/NSIAD-91-197, May 29, 1991).

Army Training: Various Factors Create Uncertainty About Need for More Land (GAO/NSIAD-91-103, Apr. 22, 1991).

Army Training: Evaluations of Units' Proficiency Are Not Always Reliable (GAO/NSIAD-91-72, Feb. 15, 1991).

Army Training: Computer Simulations Can Improve Command Training in Large-Scale Exercises (GAO/NSIAD-91-67, Jan. 30, 1991).

Army Training: Management Initiatives Needed to Enhance Reservists' Training (GAO/NSIAD-89-140, June 30, 1989).

Management of the Joint Chiefs of Staff Exercise Program Has Been Strengthened, but More Needs to Be Done (GAO/NSIAD-85-46, Mar. 5, 1985).

Improving the Effectiveness of Joint Military Exercises--An Important Tool for Military Readiness (LCD-80-2, Dec. 11, 1979).

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Mr. PICKETT. [Presiding.] Thank you very much. We will begin the questioning with Mr. Kyl.

Mr. KYL. Thank you, Mr. Chairman. Gentlemen, the statement that I made in my opening remarks concerning the claim that we are the best trained forces in the world is where I would like to start. That is really not saying a whole lot necessarily in today's environment, and I know that is not really the standard that any of our services have. Rather it is pretty much what you said at the very end, Mr. Gebicke, to be able to be trained to such an extent you can perform the mission in the best way with the least amount of casualties. That is really the goal.

So we ought to get away from this business of stating that we are the best trained force in the world or even saying we are the best trained force ever. We should be the best that we have ever been with the kind of technology and capabilities that we have today. Would you all not agree with what I have said so far?

Mr. GEBICKE. Absolutely.

Mr. KYL. OK. I wanted to focus particularly on the Reserve and Guard because I just do not quite understand.

Mr. TALENT. I wonder if the gentleman would not yield just so I can comment on what he just said?

Mr. KYL. Sure. I would be happy to.

Mr. TALENT. Being the best may not be good enough because we are also going to be one of the smallest forces in the world compared to the forces we are liable to be dealing with which means we have to treat casualties at ten to one ratios. So we not only have to be the best, we may have to be ten times better. We cannot afford to lose ten men to their ten men when we fight then. So I think the gentleman has a very good point.

Mr. KYL. Exactly. It is not just a matter of practicality, but also it is the way in which we approach it from a moral point of view and as a society. The Gulf War being probably the optimum example of how we would want to approach a conflict.

Mr. TALENT. I thank the gentleman for yielding.

Mr. KYL. You bet. Point well made. The Bold Shift, what exactly is the problem and why is Bold Shift such a change, and is the primary problem here just a lack of time for both the Guard and the Reserve?

Mr. GEBICKE. I think a lack of time is certainly one problem. In addition, I think the individual skills qualification issue is an issue of retraining more so than anything. For reservists, we are talking about people who might be trained in one occupation specialty, but maybe for whatever reason change jobs—you have a very mobile society out there, join another unit and find out that they do not have the occupational specialty that the unit needs. So then the reservist becomes a member of that unit but an untrained member of the unit. So retraining has to take place.

You also have quite a bit of turnover that is taking place in all those units. I do not know how many times I have heard the adjective "a turbulent period" for the military. I just hear it over and over again, and the numbers kind of bear that out. If you also look at the active side, at the percentages of people who have less than 4 years experience in the military, those percentages are very high. Now they are lower than they were a number of years ago, but

they are still high. The Marine Corps, for instance, has 58 percent of its men and women who have less than 4 years experience, and it drops down in the Air Force to about 30 percent. It is about 43 percent overall.

Now the Bold Shift initiative, Mr. Kyl, was designed to get the active forces more involved in the training of the reservists, and that is the whole premise behind the effort to provide thousands of active force Army and Marine Corps individuals to help those reservists learn their trade, learn their skills, and perform more effectively in crews and platoons. That is the challenge that the Army and the Marine Corps face.

Mr. BONANNO. If I could add to what Mr. Gebicke said, sir.

I think it is important to understand the difference between combat support, combat service support and combat forces. As you know, the Army Reserve is the Reserve organization where most of the support capability lies whereas in the Guard it is primarily combat. Combat skills are much more perishable than are support skills. When you realize that a lot of the functions that are performed on the combat support side are focused on the individual skills, there is less reliance on collective skills that become more important in a combat type of organization.

For combat training the philosophy is essentially crawl, walk, run.

You have to be able to do your individual job before you can be proficient at the squad level and then at the higher echelons as you go on up through platoon and company and so on. So for combat skills, the collective training aspect becomes more important, and these skills are also much more perishable. reservists do not have an opportunity to practice those skills in their civilian jobs because there are not any comparable civilian jobs.

Mr. KYL. Thank you. I will conclude here with an observation. It is probably good that Sonny Montgomery is not here, but somebody has to, I think, say that the emperor has no clothes, and it is probably an exaggeration, but when we talk about the Guard and Reserves providing a more cost effective way to round out or supplement our Active Duty forces, I have never been convinced that it is more cost effective because of the problems that you have alluded to here. You have not gone into great detail about them, but I guess I would make the assertion and ask you to refute if you think you can that in point of fact we would probably more efficiently achieve our readiness goals by having a relatively larger Active Duty force—I am particularly talking about the Army here—and much more specialized and smaller Guard and Reserve units that could meet the goal of quick deployment in time of crisis. Any comments?

Mr. GEBICKE. Yes. I have a few that I would make on that score. As you know, the active services are downsizing. The Guard and the Reserve are downsizing as well. There is a potential here for the Guard and Reserve forces that remain after the downsizing has been completed to actually strengthen themselves through the addition of some skilled individuals from the active forces who may be completing their commitment in the Guard or the Reserve. So, in effect, the hypothesis that you laid out could really bear fruition, and it could come to be.

Number one, the active forces are going to be smaller. The Guard and the Reserve are going to be smaller also, but, as you are aware, the Guard and the Reserve are going to be a larger percentage of our overall force, I think 55 percent as opposed to 50 percent today. You are also aware that in a two major regional contingency situation, we are going to have to really rely on those Guard and Reserve units to be there and to be ready to go.

We were very fortunate in Desert Shield and Desert Storm. We were very fortunate in Desert Storm that we had Desert Shield. We had 5 months to put people through the paces, and the big difference between the active and the Guard and the Reserve was in the active, generally the people came to the theater with their individual skills honed. So the post-mobilization training that took place, the additional training that took place in theater, enabled them to learn to work together in groups. When the three roundout brigades that I talked about were called, they did not have the individual skills, and they had to go back to the drawing board at a very basic level.

Mr. KYL. Thank you.

Mr. BUYER. Will the gentleman yield on that?

Mr. PICKETT. Just to follow up?

Mr. BUYER. To follow up with this question, Mr. Chairman.

Mr. PICKETT. Yes, please do.

Mr. BUYER. Isn't the pressure of downsizing not only on the active but on the Guard and Reserve? There are slots that are already there, and they are going away, which makes those who are in the Guard and Reserve that much more competitive for whatever slots are going to be left. Then you have got those who are coming off the active duties, and you say, well, those coming off Active Duty can help and are some of those enhancers. You did not use the word "enhance," but there is an enhancement if they can get into the Guard and Reserve. So are you seeing that those on Active Duty are making their way into Guard and Reserve? Are you seeing that out there? It is one thing to say we have got all these experienced people that could go into the Guard and Reserves, but my experience is that they are having difficulty also being competitive for those slots that are already taken.

Mr. GEBICKE. Assuming it happens, right. I cannot comment on that with specific numbers. We have not done that work. We have some work underway where we are looking at manning levels in the active force right now and the counterpart of the complementary piece to that is to look at that same issue in the Reserve and the Guard, and we have not gotten to that piece yet.

Mr. HOLMAN. What you say historically is true, though, in terms of difficulty of Active Duty people going into the Reserves. We are aware of that. As Mr. Gebicke says, the next piece is to look at what is actually happening now with the separation incentives that are being given to Active Duty military personnel. Are they, in fact, going into those units and shoring them up where there are gaps in skills and so forth?

Mr. BUYER. All right. Thank you for the clarification.

Mr. PICKETT. OK. Mr. Talent.

Mr. TALENT. Thank you, Mr. Chairman. I have two questions. One is in the area that the gentleman from Indiana was discussing.

The Army estimates it would take 90 days to provide proficiency training for Reserve units. Is that Guard units too?

Mr. GEBICKE. Yes.

Mr. TALENT. After mobilization. My specific question is do you agree with that? I mean realistically do you think it can be done in 90 days, and second, what would you advise us to be looking for as benchmarks for determining how adequate training levels are? I have been watching for various signs that perhaps the forces are hollowing out. In fact, I will not say perhaps. In my opinion, they are. Your testimony was very useful, but, of course, it describes a very complex situation in which you are looking at a number of things and really having to judge how they relate to each other. Quality is not something that you can look at simply. One of the points you are making is you just cannot look at flying hours anymore or hours in tanks. So if you were in our position, not being the experts that you are, what would you look for to say if you see these things we know we have problems or, these things look pretty good? So you can answer my specific and then my general question.

Mr. GEBICKE. Sure. Your first question was about the 90 days. In effect, the 90 days is just training time.

Mr. TALENT. Right. I understand.

Mr. GEBICKE. Whether or not that can be accomplished would depend on whether or not reservists possess the individual skills at the time they arrive. You know right now that is questionable.

Mr. TALENT. You would say the 90 day figure right now is questionable?

Mr. GEBICKE. Yes.

Mr. TALENT. OK.

Mr. GEBICKE. The additional time necessary when you consider the transportation from the home station to the post-mobilization station and then to the point of embarkation, you are basically talking about a 30- to 45-day additional period. So, in effect, from the time you start the process, it extends out to about 135 days possibly as a minimum. The second part of your question dealt with indicators that maybe we could look at that might be predictive in nature. I do not have an answer for you right now, but I would like to comment on something that we have underway. In fact, Mr. Bonanno on my staff is working this issue currently.

We have a review where we are making an assessment of readiness indicators, and as you are probably aware, the military and GAO and many other organizations refer to readiness indicators as the SORTS data. SORTS data really just captures a few key elements of readiness. It captures information on people, equipment, and training. But readiness encompasses much more than that. It takes into consideration morale, experience, mobility, and many other factors. One of the things we have found with the SORTS indicators is that they are great for what they are intended to measure, but they are not as comprehensive as they should be.

We are trying to do a couple of things in the work we have underway now. First, we are trying to determine how much more comprehensive indicators should be. Second, and more importantly, and it gets to your point, to determine which of the indicators have predictive value. One of the things that we are planning to do next

month is to invite a number of senior officers, both active as well as retired, to the GAO building to help us go through the readiness indicators that exist and come to some agreement hopefully as to which of those indicators may indeed be predictive in nature.

When you get down and you talk to the units, they basically say we are okay today. Readiness is okay. But we are really worried about tomorrow. Mr. Holman was in Europe recently and what did that colonel tell you?

Mr. HOLMAN. I believe the quote was the sword is still sharp, but the indication was, it is growing dull. We are still able to complete the required missions if called upon in wartime but the sword is not quite as sharp as it used to be. So a little concern exists about readiness today, but a much greater concern about tomorrow from a number of standpoints.

Mr. TALENT. As you have very effectively pointed out, that is with regard to the active. My great concern is that, as we rely more and more on the other components, we are going to kid ourselves about being able to fight the two contingencies at the same time. Even if you have a lot more money than we do now, it is a whole lot more difficult to keep the Reserve and Guard components up to Active Duty levels in terms of training because there are just inherent difficulties if you are in those components.

Mr. GEBICKE. Yes. There is one more limitation there, too, and that is that you only have a couple locations where you can train large groups of people. If you are trying to get a large group of people ready to go all at one time because maybe you are involved in two MRCs, you are limited by available facilities.

Mr. BONANNO. If I could add just one thing on the 90 days, I agree with what Mr. Gebicke said in terms of this being a very ambitious undertaking. But the 90 days is based on the assumption that Guard units have achieved proficiency at platoon and company level and as Mr. Gebicke indicated, based on 1992 data none of them achieved their pre-mobilization goals. So it is going to depend very heavily on how successful the Bold Shift initiative is in helping them reach that level of pre-mobilization readiness as to whether they can, in fact, be ready at the brigade level in just 90 days.

In fact, there are not even any plans to train at the battalion or brigade level until they have, in fact, achieved proficiency at those lower levels. So it is a big question.

Mr. TALENT. We know that for Desert Storm, the Guard and Reserve were not able to mobilize and be deployed within what was it—6 or 7 month timeframe that they had then?

Mr. BONANNO. Well, one brigade trained at the National Training Center for about 90 days after which it was validated as being proficient. But the war had ended just about that time.

Mr. TALENT. Thank you, Mr. Chairman.

Mr. PICKETT. OK. Mr. Buyer.

Mr. BUYER. I do not mean to harp on the same issue, but I think it is one that is very, very important to a lot of us. Last year we heard testimony from Mr. Rosker from the Rand Corporation who said it would take 128 days and now here today you said it could possibly take a minimum of 135 days. So when they come forward and say, well, we can do it in 90, let us not kid ourselves. The con-

cern that a lot of us have is let us be realistic. If we are going to set certain goals or objectives, then let us be pragmatic.

If our goal is truly to be successful in two MRCs, then we should fund it and provide the force structure necessary to achieve that. Do not make up force enhancers that have not even been discovered yet or for which the technology is not even there. Do not talk about our enhanced brigades that are not even trained up and ready to accomplish that. So that is why we ask those questions and get on to that stump.

Mr. GEBICKE. Yes. If I could just add something to what you said.

Mr. BUYER. Yes.

Mr. GEBICKE. That was an excellent comment. One of the realities is that our military has a very, very positive attitude, and they should. If they are given a task or a mission, they take on that task and their mission, and they are dedicated and they are conscientious, and they do it to the best of their ability. It is probably this positive attitude and potentially even one of over-optimism that gets us to the point where they say they can do it in 90 days or 130 days. But the proof is really when you have to go, can you go?

Mr. BUYER. Right.

Mr. GEBICKE. The brigades could not do it 3 years ago. Could they do it today? We do not think so. It would take a lot of work. It would take a lot of effort. If you had the two MRCs underway at the same time, I know you cannot get all the brigades ready at once because of the limitations on facilities.

Mr. BUYER. I think that for years now there has been a tremendous amount of over-optimism in the command structure of the National Guard to say I have been holding this dance card for a lot of years, and I want to go to the dance, and the political pressures of that in saying that, well, if we are going to downsize, give me the opportunity to go to the dance, and the response is we will give you 15 enhanced brigades. Then we are going to say, well, all right, fine. Here is your dance card. We are going to have to make sure that you are ready when, in fact, you go because we should talk about the political consequences of this.

Holy smokes. It is one thing, I tell you, when you take the active force and send them off to war. But it is another when you start plucking the civilians right out of the community. You take the pharmacist from the retail corner. You take out the guy that works at the lumber yard. You take away the mailman. You take away the dairyman. You take the guy that sings in the church choir. I'll tell you what. When you put them out of the community and start bringing them home in body bags, that is a lot different. The political consequences of the second MRC when you call up these ready brigades and they are not trained to respond, wow. That is a lot.

Mr. GEBICKE. Yes. We are getting ready to issue a report in the next few weeks that talks about the deployability of the Guard and the Reserve. One of the things that we have found in that work is that DOD's policy is a little bit different than the policy that we at GAO would like to see. It basically says that a member can stay in the Guard and Reserve even though he or she is not deployable worldwide. You probably realize we had 20,000 people that did not deploy to the Persian Gulf because of medical conditions and var-

ious other conditions. The DOD policy is—and the Army is the only service that actually follows the DOD policy—not a worldwide deployability standard.

In other words, if you have a medical condition, you can remain in the service and you may be able to go to a certain theater if you can receive medication or have a condition that can be monitored. But there might be other theaters that you cannot go to because they are in Third World countries and they do not have modern facilities or you might not be able to get the medicine. So it is an issue that we are in a dialog with the DOD on right now.

Mr. BUYER. I thought that there were regulations on that point, though, that non-deployability is an involuntary transfer to the IRR? No?

Mr. BONANNO. No, sir. DOD policy does permit exactly what Mr. Gebicke described.

Mr. BUYER. Are you comfortable that the Bold Shift initiative is realistic and is going to be the tool to help these roundouts?

Mr. GEBICKE. It is a positive first step. We are uncertain at this point in time as to whether or not it is going to completely solve the problem. Only time will tell. As we pointed out, the latest data that we had reviewed prior to this hearing was 1992. We are in the process of receiving 1993 data which will give us a more current look as to how successful that program is.

Conceptually, it makes a lot of sense. I mean take the people who are well trained, who are very experienced and integrate them at the very lowest levels into the Guard and the Reserve. Our initial observations are that the Marine Corps has done that fairly successfully, that they have gotten people down to the lower levels. The Army is taking a little different approach, and we are in the process right now of determining how successful that approach may be. But the Army's approach is basically to integrate those active trainers at higher levels. We have—I will tell you right now—we have some concerns about that, some apprehensions about how effective that may be.

Mr. BUYER. Mr. Chairman, I have one other question, if I may?

Mr. PICKETT. Sure. Go right ahead.

Mr. BUYER. When you mentioned the Marine Corps, currently the Marine Corps has O&M funding for an end-strength of 159,000. The current authorized end-strength for the Marine Corps is 174,000. This means the Marine Corps can only fund entry-level training for its Marines at the moment. Right now the feedback that I get from people out there on the ground is that we are becoming chronically under funded for the follow-on training such as fire support school, squad leader school, and NCO school.

The result is that the commanders want to send their Marines to these required schools to gain greater experience and they are not getting it. We have received testimony that 58 percent have less than 4 years of experience, and we need more experience in senior leadership. That really concerns me with the Marine Corps. Are those shortfalls occurring in other services, do you know, or can you testify on that today?

Mr. GEBICKE. Sure. I do not have the numbers on the other services, but generally when you start thinking about how your training is funded in any of the four services, it is funded through the

operations and maintenance account. There are a number of competing demands that a commander has to sort through in making a decision on how to provide the money that he or she is eventually given. Training is one. Joint training as subset of training is becoming more and more emphasized, and there is certainly some pressure from the new command, the USA Command, to have the services set aside some funding for joint training. You see, that command does not provide the funds for joint training. That funding has to come from the individual services. So that is in competition, if you will, to the other types of training that that commander may need to send his people to.

Mr. BUYER. Can we move to some specifics? Are you aware whether or not the Navy is also having difficulty in funding some of its other training for its senior NCOs or whether the Air Force or the Army is also?

Mr. BONANNO. I can speak to the Army. I do know that in the Army's primary training organization, which is the Training and Doctrine Command, there has been a cutback in funding available to them. The way they have dealt with that is to reduce the number of skills that they teach to new soldiers who, after having completed basic training, then move on to what they call advanced individual training where they learn the specific skills of the job they will be expected to perform. They have had to cut back on some of those tasks that are normally taught in that advanced training.

Mr. BUYER. How many skills were they at and how many now are they reducing to?

Mr. BONANNO. I am sorry I do not have numbers. I do not have specific numbers. This is something that came up in some discussions that we had. But the impact of that is that it creates an additional responsibility on the part of the unit to which that soldier is assigned to make up that training that he did not get in the formal schoolhouse environment.

Mr. BUYER. Is that good though?

Mr. BONANNO. No, it is not good. It is complicated by the fact that also in the case of the Army they have resorted to something they call "borrowed military manpower." This is because of some civilian personnel reductions that they have suffered. They are borrowing military personnel to perform civilian functions. So that has reduced the number of soldiers in units available to provide this training.

Mr. BUYER. Which affects readiness?

Mr. BONANNO. Absolutely. It compounds the problem.

Mr. BUYER. Are you conducting any kind of studies in that area or not?

Mr. BONANNO. Not specifically. In conjunction with the readiness indicator work that Mr. Gebicke referred to earlier, what we hope to do is once we have identified indicators for which there may be some broad consensus that they represent the most important indicators, we then would ask the Department of Defense to apply those indicators to current data to see how readiness has been affected.

Mr. HOLMAN. One of the jobs that we are looking at currently is the manning levels of the services. So far we have seen much

greater problems in the Army than say the Marine Corps or the Navy.

Mr. BUYER. On this issue?

Mr. HOLMAN. Manning in general, but the fact that it also affects training. I am not personally aware of the problems you identified for the Marine Corps. We will certainly look at it as we go along, but we are aware of manning problems in the Army that do impact the ability to train. As downsizing increases and, of course, the Army has taken the greatest share of that so far, it does strain the resources of the people, the trainers at the organizations, be they in the schoolhouses or out in the field with units. In some cases the Army will speak of aggregate manning levels as being rather high, be it 95 or 100 percent.

But if you go down to an individual unit and you start saying, do you have the people by grade, by specialties, that you need, you will find frequently that they will tell you they have some severe shortages. Some folks at Third Corps recently told us about having very significant shortages in E7s through E9s, people who would be key in training younger soldiers, junior officers. Well, that poses a tremendous challenge to train. It also raises questions in their mind as to the future potential for a hollow force. How do we keep today's force well trained as it should be——

Mr. BUYER. Right.

Mr. HOLMAN. When we are short of those people who are the key trainers?

Mr. BUYER. Well, gentlemen, I would appreciate if you do put that on your radar screen. That concerns me when commanders out there are actually dealing with that problem at the company level. It really concerns me that if they have to make up that training that they are not getting up to the schools or having to do it within the company at the same time they are having to do the field training and all their other things they are doing. Not only does it have an effect upon the present readiness, but an effect on the people who are going to mature into the next form of leaders. If they are not well trained, then I am concerned about our military as we move to next century.

Mr. GEBICKE. There is one other thing you may want to keep in mind on that point which is a great point you brought up, and that is in competition for training funds are also expenses for base operations which impact quality of life.

Mr. BUYER. Right.

Mr. GEBICKE. You are aware of that. So that is another decision that has got to be made in that same account.

Mr. BUYER. Right. Thank you, Mr. Chairman.

Mr. PICKETT. Mr. Gebicke, it was my understanding that the session this morning was to focus on service and joint training lessons learned from recent conflicts. We seem to have been talking here about nothing more than the readiness issue which is going to be dealt with in a number of other hearings, and you probably are aware that General Sullivan and General Mundy have both been over for posture statements on their respective departments and have said that they are satisfied with where they are from a readiness standpoint. So I do not think we are here to second-guess General Sullivan and General Mundy this morning.

What we are trying to look at, I believe, is the larger issue, and you probably remember or have heard about Task Force Smith in the Korean War when this small group of Army people were sitting there on Route 50 in Korea, and the tanks that were not supposed to be there came down the road because somebody had decided that that terrain would not allow the use of tanks, but the North Koreans found a way to use them. In the Vietnam War, when the Army had the notion of air-land battle, and how that was going to tip the scales in favor of those who had that capability, and how the North Vietnamese learned to deal quite effectively with the air-land battle and the kind of terrain that we had to operate in.

More recently in Somalia when we lost some people, and it was a very embarrassing situation for our country and for the Army as a result of our people finding themselves in an environment where they should not have ever been to begin with and the consequences of believing that technology can overcome all kinds of obstacles in the conduct of what amounts to a war operation.

Now these are the kinds of lessons learned that I think we are interested in and what can you tell us this morning about whether or not the training of the United States military forces is taking into account changing tactics, changing circumstances and changing terrain and environments that we will have to operate in?

Mr. GEBICKE. OK. As a result of Desert Shield and Desert Storm, one thing that came out loud and clear was the need for more joint training. We have had situations to add to——

Mr. PICKETT. When you say "joint training," Mr. Gebicke, I do agree with you and I understand, but I think that you should distinguish between the level at which this joint training should take place, and that is an important factor. If it is going to be helpful, I think we need to know that.

Mr. GEBICKE. OK.

Mr. PICKETT. So if you will make sure in delivering your remarks if you tell us at what level we are operating.

Mr. GEBICKE. Let me give you an example in Desert Storm of where more joint training would have avoided some adverse consequences. We issued a report several years ago that talked about the interaction of the Navy aviators with the Air Force. As you probably know, in Desert Storm, the Air Force really had control of the air tasking orders. There were six carriers involved in Desert Storm. Two of those carriers were in theater long enough before Desert Storm to actually work with the Air Force very closely. Four carriers came in subsequent to the two, and there was not an opportunity to work with the Air Force and there had been very little training between the Naval aviators and the Air Force Headquarters.

We basically had some situations where the air tasking orders were either not understood by the Naval aviators which put them in certain situations where in one case some enemy aircraft actually escaped from the theater. In another case, some aviators were put in situations where they should not have been in certain sectors and were not using their identifier, and they were almost fired upon by coalition forces, and I cannot give you much more than that because it is classified. But we had some serious incidents

where enemy aircraft did escape, and we had other instances where we could have lost some of our own aircraft.

Basically, training, joint training at that level, understanding the tasking orders of the Air Force by the naval pilots would have precluded a lot if not all, of that from happening. So that would be another example to add to the three or four examples you gave through history of avoiding some problems. The other thing that came up from Desert Storm very clearly is that people need to know their jobs. They need to know their individual jobs and once they know their jobs, then they can perform effectively in platoons and crews and battalions and brigades and what have you, but they have got to know their individual jobs.

Another issue that came through loud and clear is command and control, particularly with regard to logistics and the need for training to intertwine logistics with combat. In many of the exercises that military forces have at the NTC and in other locations, logistics and sustainability do not have a major role. So when you get to a major theater and you have a large group of people, it is the first time that that interaction really begins to take place. The Desert Storm experience clearly showed that there was a need to practice logistics and sustainability and there are various mechanisms for doing just that.

Mr. PICKETT. Have studies been conducted to determine whether or not the military departments are actually reviewing the performance in recent conflicts and changing the doctrine under which they operate and train to reflect the changed conditions and new environment that they can anticipate as a result of past experience?

Mr. GEBICKE. I would not say that all of that is being done. Each of the services has, as you are probably aware, a lessons learned or some similar organization that tries to capture lessons that were learned. We have reviewed the organization in the Army, and we found that the Army had a fairly systematic way of capturing lessons that they had learned, for instance, from Desert Storm. Where there was a shortcoming in the Army, however, was in their tasking people to actually follow up. That is the second part of your question, to follow up, to ensure that solutions are implemented for the problems that are raised. We are in the process of looking at the systems in the other services. Right now the preliminary indications are that the Army probably has a more systematic way of gathering the information than the other services. But even the Army has room for improvement.

Mr. HOLMAN. If I might, let me tag on to that a little bit, sir. In terms of Desert Storm and lessons learned—I think one of the big lessons was the recognition by the services of the need for more joint training, joint doctrine development, and commonality of terms. The services found different terms meant different things to different people. So as a result, we have seen this increased emphasis on joint training. We have the effort to give the task to the USA Command now to foster joint training. There are many efforts underway to develop doctrinal publications, training pubs, and things that would enhance that joint training. But I think, as some of the lessons learned papers we have seen as recently as Somalia, there is still a long way to go in terms of having people assigned to joint

organizations who understand joint issues and function effectively in a joint environment.

It is a matter of continuing that emphasis on training. So I think the department is moving in the right direction, but are they there yet? No. They recognize it. They still have a good way to go, but I would say that jointness has been given major emphasis and major change.

You mentioned Task Force Smith. You mentioned there were problems understanding terrain—if I could just tag on there—in terms of simulation. One of the tremendous things that is occurring with advanced simulation technology today is the ability to develop sophisticated databases covering terrain anywhere in the world. That certainly does a lot to enhance battle staff planning and training as they prepare for operations.

We have seen a lot of that, particularly in the Army, and I think we will see a lot more of it in the joint arena. So a lot of the things that have occurred in the past, they are being addressed. Things are not perfect, but DOD is moving in the right direction.

Mr. PICKETT. Well, we seem to have come to what I think is the central issue, and that is doctrine. Doctrine being how you are going to conduct your operations. But doctrine has to be influenced by what you have learned in the past and what you expect to happen in the future. Out of that, you come up with the way you plan to operate which is laid out in a clear, understandable and explainable form so that when they get into battle everybody is singing off the same sheet of music and is going to react the same way to a similar set of circumstances.

It would seem to me that the key point we are talking about is whether or not the individual services, first, are taking advantage of their lessons learned by getting it incorporated into their doctrine, and whether that doctrine is being kept current. Second, whether the services collectively are able to translate this into joint kinds of activity, and that is where we could use some help to know if that is taking place, to what degree? Is it good, bad, can it be, should it be improved, and what needs to be done to enhance that capability?

Mr. HOLMAN. Certainly one of the things we are doing today, we do have a review underway looking at the changes that are occurring in joint training. One of the things we are tracking is the evolution of these new doctrinal publications, seeing which ones are being developed, and to what extent they are addressing problems related to lessons learned in the past. We are doing that from a joint standpoint right now.

Mr. PICKETT. At one time, it was my understanding that General Gray said that every Marine was trained to be a fighter. It did not make any difference whether they were going to end up being a stenographer or a receptionist or whatever. If they went through this training, then each one was an individually qualified fighter, with the same basic training to handle certain kinds of weapons and to react in certain kinds of circumstances. Is that true of all the services? Are they taking that kind of approach to the way that they are training people?

Mr. HOLMAN. My experience has been that what you just quoted from the Marine Corps, has been a recurring a philosophy of theirs,

and I think there is a certain truth to it. You do need to focus on the individual, but that is a building block, going from individual, small unit, larger echelon training. Marine Corps lessons learned from Desert Storm will tell you that they were not quite as prepared as much as they should have been for large scale operations, particularly in a joint environment.

Marine Corps procedures are not necessarily the same as Army procedures or Navy procedures. How you interact in a joint environment is not the same as you would in a single service environment, and so there are lessons learned. Marine Corps lessons learned information indicated to us they recognize that. Now, how much that has actually changed and reflected in how they are training to date? We have not gotten down to that level of specificity to see. But certainly their lessons learned tell us they know there has been a problem.

Mr. PICKETT. I can tell you that the Army has got a little booklet that looks like the sawed off end of a two by four, about that size, and it has in it every fact that—it is basic to every member of the Army supposedly. Every member of the Army is supposed to be familiar with all aspects of the different parts that are included in that book. Is the Army following through? Are they training the people to understand and be able to handle what is in the book that they are using?

Mr. HOLMAN. I am not familiar with the particular book. I know the Army has many, many different training manuals, standards by echelon and so forth that they train to, and that is the basis for which they put together their training plans on a continuing basis.

Mr. PICKETT. This is supposed to be the fundamental building block that every member of the Army is supposed to know about from making up your cot to operating a 50 caliber machine gun.

Mr. BONANNO. I think that is probably the Soldier's Manual which pretty much lays out what you just described. We have not done a review looking specifically at that issue, but as we have gone out and observed training, we have seen an unevenness in terms of how much emphasis is given to those individual things. For example, in the area of survival skills, you will see that combat units tend to emphasize training on survival skills much more than do combat support or combat service support units. I think it is an area that probably needs some improvement.

Mr. PICKETT. I know the issue of simulation is one that you brought up earlier, and is an issue that would appear to come into play at a certain level of activity. I do not think you use simulation at certain individual levels of operation. What views do you have of the manner in which the military departments are making use of simulation, and is there an appropriate use of simulation in the joint training field?

Mr. HOLMAN. Well, certainly simulations are being used literally at just about every level these days, particularly in the Army. You see simulations used for gunnery training. They can help reduce the amount of actual live fire that you have to do. They prepare for a lot of the training gates that they must go through. You see simulation used at higher echelon, particularly for training of battle staffs. So it goes from the smallest to the highest. In terms of using simulations in that manner, I think most people would agree

that, to date, the Army has been a leader in using a lot of that technology. But we see the other services quickly moving in that direction.

Of course, the Air Force and the Navy have always used simulators for aircraft and so forth. Simulation has tremendous capability, we believe, in the area of joint training, particularly as you are focusing on your battle staff. It provides an opportunity to put people in a realistic environment where they have to develop their battle plans, they are executed, they can see the results, particularly if they are executing against an automated or opposing force. It can give a real test to their capabilities to plan, coordinate, and work together. Our reviews of training exercise in the past indicates that battle staff arena is one that constantly needs to be focused on, particularly when you are putting together staffs who have not worked together before. Simulation technology gives tremendous capability in that area.

Simulation allows you to do much more repetitive training than you would do otherwise. A good example is what used to occur in Reforger exercises in Germany where you put many thousands of troops out on the field training. We have had people tell us that the lower echelon troops, the platoons, they can sit around and twiddle their thumbs for a few hours waiting for things to change, the battle to take on a different direction and so forth.

In the recent years, the Army has focused more on using simulation to train senior level battle staff. That allows for a quicker pace action, more realistic results, ability to focus on the real targeted training audience, and to key those training objectives. So we see a much greater potential for use of simulations.

We have raised questions in the past about the management of simulation technology. There have been concerns raised by DODIG about proliferation of simulation without their development being well coordinated. DOD is moving in the direction of trying to bring better coordination to that. That was evident with the creation of the Defense Modeling and Simulation Office. But I think it is an area that we constantly want to watch and to be cautious about because with anything there can be a tendency to go overboard sometime and just keep throwing money at this because there are good aspects to it. But it is something that we watch.

Mr. PICKETT. I did not want to get into this but I think what we are talking about here is ensuring that changes in strategic objectives and ways of conducting warfare are translated down into the fundamental ways that people train. Sometimes that does not happen. That is all I have.

Mr. SKELTON. Thank you. It sounds like you covered a great deal of the waterfront, and I thank you for your excellent questions.

Mr. PICKETT. I did not get into your questions.

Mr. SKELTON. We had a period of time in the desert known as Desert Shield for some weeks, actually months, where the American forces, particularly the Army, and I suppose the Marines to a certain extent, had the opportunity to train. Did you address how helpful this was, or how the outcome would have differed if we as a force had to go into combat immediately?

Mr. GEBICKE. We have not addressed that. I do not know that that has been addressed. Certainly, no doubt about it, the 5

months that we had in Desert Shield helped prepare us for Desert Storm.

Mr. SKELTON. They were ready.

Mr. GEBICKE. They were ready, they were very ready.

Mr. SKELTON. All the way down to the tank acclimated, running exercises, hitting targets.

Mr. GEBICKE. If you think about it, just the time that we had gave us the opportunity to bring the sheer numbers of people that we needed into the theater.

Mr. SKELTON. Yes. I doubt in the history of warfare that has ever happened or that it will ever happen again. It might not hurt somewhere along the line for you to look at this, but to also point out that it is a historical aberration that you come as you are, trained as you are back at Fort Hood or wherever the case may be.

If you had one minute, 60 seconds, with each one of the service chiefs, and you wished to tell that service chief what needed to be known about what you have learned in your efforts concerning training, crystalize it. What will you tell that service chief, each one now, in your 60 second?

Mr. GEBICKE. I would probably say make sure you train the individuals.

Mr. SKELTON. No. Go through each one for me, unless it is the same.

Mr. GEBICKE. For me it would be the same. Charlie Bonanno has much more experience with the Army.

Mr. SKELTON. Well, he will have his 60 seconds, too.

Mr. GEBICKE. OK. I would say train in peacetime the same way you are going to perform in wartime. Make sure that the individual knows his or her job and make sure that they can perform it well. Keep in mind that in the future you are probably not going to be on the battlefield alone, you will probably be on the battlefield with other services so my message is make sure you understand how your counterparts will complement you on the battlefield.

Mr. SKELTON. Mr. Holman, you have 60 seconds.

Mr. HOLMAN. All right. I think I would say to each of the service chiefs to recognize that you are in an era of declining resources, make sure that your training people are looking at the right mix of training that you need, both in simulation and traditional training. Make sure you are well grounded in the basics. I would say to the Army—march on in your use of simulation but do a little bit better job of trying to identify the right mix because it does have a bearing on your resource requirements.

I would say to the Navy that it probably needs to do a little bit more in terms of looking at and increasing your use of simulation capabilities.

Mr. SKELTON. Looking at what?

Mr. HOLMAN. Use of simulation technology to enhance training, particularly as you move away from the blue water Navy more toward littoral warfare where you are going to have to integrate and operate more with the other services. You need to look at how you can better achieve that standard of training. I would say, again, to the Air Force and other services make sure you are well-grounded in those basics.

I would say to the Army, look at your unit manning levels, and look at the MOS skills you have. Do you have enough people to man those units, to train those units? Do you have the right mix of ranks, grades, and MOSs? What does it look like in the out-years as you further reduce your force?

Mr. SKELTON. Thank you. Mr. Bonanno.

Mr. BONANNO. I think I would take my one minute just to emphasize one key point that both Mr. Gebicke and Mr. Holman mentioned, and that is the importance of training the individual soldier or marine or airman because they are only going to be able to succeed at the higher levels of organization if they are adequately trained at the individual level. I think what we saw in the past was a tendency to overlook the importance of that individual training. Interestingly enough, I think during Desert Shield one of the things that we saw was that the servers very quickly went back and focused right away on individual skills because it is a building-block approach and it is extremely important to success at each level.

Mr. SKELTON. You mentioned on page two of your prepared statement, which is entitled "Training Is a Never-Ending Challenge," that well-trained forces were more likely to survive their first battles or missions, and that their chances for surviving and minimizing casualties increased with each succeeding mission. You refer back to the war in Vietnam but my gosh, that goes back to the beginning of history, no doubt, in our country. The Yankee forces learned that as a result of the battle of Manassas. The American troops in desert combat in North Africa for the first time faced the same sad lesson, and I think that carries on down to today.

You also referred to the National Training Center for the Army, the Air Force's Red-Flag exercises. Does the Navy have a counterpart on that in any of that same area?

Mr. GEBICKE. The Navy has something they call Ocean Venture. It is an exercise, that the Navy conducts on a regular basis, but with the Air Force you have Red Flag in Nevada, and the Army's National Training Center in southern California. Now, Mr. Holman is jotting me a note here. He mentions Top Gun for aviators would be something comparable that the Navy may have.

Mr. SKELTON. What type of joint opportunities? You cannot throw the Navy out in Fort Irwin or the National Training Center. You cannot throw the Navy in the Air Force Red Flag exercise, though I suppose you could. Is there a comparable type of premier training program that you could throw together because each of you have stressed jointness, and there may be a weak link between them and weak links cause either defeat or more casualties than necessary. Is there such an animal?

Mr. HOLMAN. One of the things you can certainly do is in the area of computer simulation where today through distributive interactive simulation you can tie together diverse——

Mr. SKELTON. At what level? Admirals, generals, privates, corporals, where?

Mr. HOLMAN. Certainly in many cases this is very useful at the senior office battle staff level for integrating plans, and that is where you can really work the issue from a joint basis with even the Navy tied in with the Air Force and the Army and Marine

Corps. Each service has varying simulation systems. They continue to develop them.

Mr. SKELTON. From your expertise and from your information that you have gained on this, how far along are we toward what you would consider a proper amount of integrated, simulated training?

Mr. GEBICKE. We are at the beginning. I was down at the USA Command with Admiral Miller just last week, and we were talking about this.

Mr. SKELTON. John Miller? Or Paul David Miller.

Mr. GEBICKE. Yes. USACOM. We were talking about this very issue, and basically the philosophy of his command is not to come up with some brand new large exercises for joint training but to build on what the individual services already have planned, and bring jointness to those individual exercises. Reforger, as I mentioned, in 1994 is going to be much more joint than it has ever been and Reforger was principally an Army exercise. Ocean Venture in 1993 was much more joint than it has ever been, and Ocean Venture is principally a naval exercise.

So it is happening, and I think the command believes that doing it with smaller exercises and bringing jointness to them might be a more effective way, rather than constructing some new exercises just for the sake of being joint. Now the USA Command and the Joint Readiness Command are talking about having some joint simulation centers in the Virginia area, and USA Command has its sights on a facility down there where simulation will be used to practice the very things that Mr. Holman was referring to.

Mr. SKELTON. You have any further questions, Mr. Pickett?

Mr. PICKETT. Well, I would just like to follow up on what he just said, Mr. Chairman. The joint war fighting center that is proposed to be located at Fort Monroe, Virginia is one capability that lends itself to simulation exercises at a fairly high level, the command level.

Mr. GEBICKE. Right.

Mr. PICKETT. The USACOM Command is looking at establishing a joint warfighting or wargaming capability. Whichever way you want to characterize it, the wargaming capability that presently does not exist. The Armed Forces Staff College at the naval base in Norfolk has a very modest wargaming capability that very badly needs to be upgraded. In light of what these gentlemen are saying with the focus being on joint exercises, some emphasis should be placed on providing adequate simulation resources at the school to ensure that it can carry out its mission of training joint officers in the final leg of the joint program.

Mr. HOLMAN. I did not hear a particular question, but if I might respond a bit. We mentioned earlier the need for cost effectiveness in simulation capabilities. One of the issues we are looking at, and we are interested in as the simulation technology evolves, is how many of these simulation centers do we really need today to support simulation training given the efforts that are being made to develop the distributive interactive capability where you can link together different simulations in many different locations to fuse them together for a training event? The Army has a very elaborate

National Simulation Center out at Fort Leavenworth, KS, and it remotes training all over the world at times.

The USACOM rightfully so is interested in developing simulation capability. We have seen indications they intend to develop their own capability. At the same time the Joint War Fighting Center at Herbert Field, FL, is moving up to Fort Monroe. You start asking yourself, and we have not gotten the final answer yet, but how far are each of these going to go? Are we going to have too much redundancy or is it going to be complementary? Just how much? We are still trying to sort that out. We do have some questions about it.

Again, we have seen tremendous capabilities in simulation. It is just a matter of what is the right mix and how far do you go in giving everybody a simulation capability?

Mr. PICKETT. Well, all the military war colleges have wargaming capability. The point I was trying to make is that I think you all started out talking about the need for more joint exercises and more joint kinds of operations so that the military departments would be able to interact and work more effectively together as a single unit. If that is the case you need to bring the wargaming capability out of the upper echelons where only the senior officers are using it with some support staff and perhaps down a much lower level where you will begin to get the kind of inter-service interaction that is going to be necessary to have truly joint operations on the lower unit structure, whatever it may be in the next services level, because that is where you need it.

The guys at the top know what they want, but you have indicated that the trouble is that people out there on the field having to execute this do not have the same understanding and appreciation for the joint role that they play that the top officers have. So it seems to me what you are arguing for is for the joint warfighting capability to be brought down to a much lower level, and the best way to get that done is through simulation.

Mr. HOLMAN. Yes, sir, I think you are absolutely right. One of the things that we are seeing today with the changed world environment is that no longer are we preparing exclusively for a major war in Europe. We are looking at a potential for varying degrees of contingencies from rather small to large. So we are not necessarily going to deploy divisions and corps to every contingency. In some contingencies we may deploy much smaller size forces such as battalions—and so we need the ability to train various echelons to work in a joint environment. We agree.

Mr. SKELTON. That was my last question. You are not wargaming the Fulda Gap anymore, and your imagination may not hit on the next time we enter combat. So you really have to cover the waterfront and everything from a Grenada, Panama, Desert Storm, Korea, each of them have their own separate problems and training challenges. Well, gentlemen, thank you not just your excellent testimony today but your excellent report. This has been very, very helpful, and I hope that each of the service chiefs has the opportunity to learn of your efforts as you have so informed us. Thank you so much.

Mr. GEBICKE. Thank you.

[Whereupon, at 11:05 a.m., the subcommittee recessed.]

[The following questions were submitted for the record:]

U.S. House of Representatives
COMMITTEE ON ARMED SERVICES
Washington, DC 20515-6035
ONE HUNDRED THIRD CONGRESS
RONALD V. DELLUMS, CALIFORNIA, CHAIRMAN

March 15, 1994

Mr. Mark E. Gebicke
Director
Military Operations and Capabilities Issues
U.S. General Accounting Office
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Gebicke:

Thank you again for coming last week to testify before the Subcommittee on Military Forces and Personnel on "Service and Joint Training: Lessons Learned from Recent Conflicts." Please pass on my thanks to your colleagues, Barry Holman and Charles Bonanno, for their willingness to testify also. I only regret that other commitments forced me to leave for part of the hearing.

As Tommy Glakas may have told you, the subcommittee has a number of questions for the record that I believe would help clarify some of the issues raised in the hearing. I would appreciate it if you, Mr. Holman, and Mr. Bonanno could answer them as a result of the work you have done on Desert Storm over the past three years.

I look forward to your responses.

Sincerely,

IKE SKELTON
Chairman, Military Forces and
Personnel Subcommittee

Attachment

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Training of Active Duty Forces a Never-ending Process

1. Does each service have a good system for capturing lessons learned and trying to prevent the repetition of mistakes? Does the Joint Staff? Do the unified commands? Does the Office of the Secretary of Defense? What mechanisms are available to oversee modifications in training to respond to lessons learned?

2. Your testimony indicates a problem of common recurring training problems. Why does the military seem to keep repeating the same errors? Is "lessons learned" a contradiction in terms?

3. Discuss the impact on training of contingency operations. Can the services make up for lost training if the Congress later provides supplemental funding?

4. What advice would you give each service chief about service training and the Chairman of the Joint Chiefs of Staff about joint training as a result of your work for GAO on training since the end of the Gulf War?

Joint Training Receiving Increased Emphasis

1. General Shalikashvili testified before our full committee that "the services all have good systems for measuring readiness, and we are improving our joint readiness assessment systems so that we can do a better job at assessing our ability to deploy and fight jointly." Do you share his optimism concerning both service and joint systems for measuring readiness?

2. Each unified command is responsible for joint training. Discuss the trade offs between service and joint training. Discuss the special role USA Command will have with respect to joint training?

3. Are there criteria in place to measure adequately whether forces are prepared for joint operations? If so what are they? If not, what would you recommend?

4. The "Tiger Brigade" of the Army's 2nd Armored Division was attached to the 2nd Marine Division during the Gulf War. The Army and Marine Corps have different doctrines: the former, AirLand Battle Doctrine; and the latter, Marine Air-Ground Task Force Doctrine. How did the two services integrate their doctrines in the Gulf? Have they developed "joint doctrine" consistent with their experience since the war? Have they conducted ground exercises? What lessons are there for the future with respect to joint training between the Army and Marine Corps?

Simulation Technology

1. Discuss the importance of managing computer simulation

training in a cost-effective manner. Any indications it is not being managed in a cost-effective manner? If so, what specific recommendations would you offer to improve such management?

2. You indicate a problem in defining the most appropriate mix of computer simulated training and traditional field training. What is the problem? What are the services doing to address the problem? What specific recommendations would you offer to address the problem?

3. One of your reports on simulation management mentions the creation of the Defense and Modeling Simulation Office in the Office of the Secretary of Defense. Why was the office created? Describe the purpose, responsibility, and authority of the office. Has it been given adequate resources to do the job its been assigned?

GAO United States
General Accounting Office

National Security and
International Affairs Division

The Honorable Ike Skelton
Chairman, Military Forces and
Personnel Subcommittee
Committee on Armed Services
U.S. House of Representatives

Dear Mr. Chairman:

Attached are responses to questions that you asked us to answer for the record following our testimony before your subcommittee on Thursday, March 10, 1994. Please do not hesitate to contact us should you require additional information or clarifications.

Sincerely yours,

Mark E. Gebicke

Mark E. Gebicke, Director
Military Operations and
Capabilities Issues

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Q Does each service have a good system for capturing lessons learned and trying to prevent the repetition of mistakes? Does the Joint Staff? Do the unified commands? Does the Office of the Secretary of Defense? What mechanisms are available to oversee modifications in training to respond to lessons learned?

A We recently issued a report on the Army Lessons Learned System, and we currently have a follow-on effort examining lessons learned systems of the other services and JCS. From what we have been able to tell, the Army with its Center for Lessons Learned has been in the lead among the services in establishing formal mechanisms to identify and evaluate training strengths and weakness of units that participate in major operations and exercises. At the same time, the Army is not achieving the full benefits of the lessons learned because it lacks procedures for assigning priorities to the lessons and tracking them to ensure needed changes are made in training and doctrine. It appears that military trainers and commanders need greater awareness of previously identified lessons learned so as to better preclude their continuing recurrence. Again, this is an issue we are continuing to review from a cross-service perspective.

Q Your testimony indicates a problem of common recurring training problems. Why does the military seem to keep repeating the same errors? Is "lessons learned" a contradiction in terms?

A One of the key factors causing training problems to recur is turnover associated with persons rotating from one assignment to another, and turnover associated with new military personnel. Our previous training reports have indicated it is not unusual to have personnel turnover within Army units of 10-12 percent per month. Our report issued last year on military downsizing showed that the services, particularly the Army and Marine Corps, have high numbers of personnel having less than 4 years of service. For example, at the end of fiscal year 1992, the percent of enlisted personnel within each service having less than 4 years of service was: Army (46.4%), Marine Corps (58.1%), Navy (43.4%), the Air Force (30.1%), and DOD overall (42.7%). The percentages are much smaller than they were 12 years earlier [where the Army had 60.3%, the Marine Corps had 72.1%, the had Navy 57.9%, the Air Force had 48.1%, and DOD overall had 57.6%], but they still represent a sizeable pool of relatively junior personnel. Another factor may be related to the effectiveness of lessons learned systems in identifying, publicizing, and instituting corrective actions for systemic problems.

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Q Discuss the impact on training of contingency operations. Can the services make up for lost training if the Congress later provides supplemental funding?

A Various military leaders have reported that deployments for contingency operations such as peacekeeping and peace enforcement disrupt planned training cycles. That is not to say there isn't some training benefit derived from these deployments; however, a number of military leaders have told us that such deployments do often curtail training and affect training proficiency in warfighting skills. At the same time, significant levels of unplanned and unfunded contingency operations can result in curtailment or reductions of planned training exercises, even where people are available to train. Because there are peaks and valleys in training during normal times, those valleys can stretch out or go lower when training opportunities are lost. Given that military training occurs on a cyclical basis, and also contends with personnel turnover, other support missions, etc., it becomes very difficult to make up for lost training opportunities, even if the Congress later provides supplemental funding.

Q What advice would you give each service chief about service training and the Chairman of the Joint Chiefs of Staff about joint training as a result of your work for GAO on training since the end of the Gulf War?

A I would reinforce the need to: (1) maintain basic skills as the building block to collective and unit training, (2) increase the focus on battle staff training (much of which can be done through simulation technology), (3) continue to build on efforts now underway to provide a greater emphasis on joint training, and do so across a spectrum of force sizes and types of contingencies, and (4) better identify the relationship and potential cost effectiveness of computer simulation technology versus other, more traditional training. Many military commanders consider their "training plates" to already be full and show no signs of diminishing. This suggests to us the need to more closely scrutinize training exercises, paring back or refocusing those found to be of marginal value. For those exercises that remain, additional efforts may be warranted to ensure (1) that training audiences and objectives have been clearly defined, (2) that mechanisms are in place to objectively evaluate exercise outcomes, identify common recurring weaknesses, and (3) a robust lessons learned process so that appropriate educational, doctrinal, and training measures are implemented to minimize recurring problems.

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Joint Training Receiving Increased Emphasis

Q General Shalikashvili testified before our full committee that "the services all have good systems for measuring readiness, and we are improving our joint readiness assessment systems so that we can do a better job at assessing our ability to deploy and fight jointly." Do you share his optimism concerning both service and joint systems for measuring readiness?

A I think that by virtue of the fact that many readiness reports we are aware of continue to report little degradation in readiness, and that such reports are at variance with manning level problems and other concerns being raised by military leaders, there is good reason to suspect that the current indicators are not as accurate or able to project looming problems as well as needed.

The primary system used to measure readiness is SORTS, or the Status of Resources and Training System. Although SORTS provides some very useful data, it does not provide a comprehensive assessment of readiness nor does it have the capability to signal a change in readiness that may be looming in the future. We have a review underway that seeks to identify indicators that might be used to supplement SORTS as well as provide some predictive capability. Examples of conditions that bear watching for their future impact are (1) a reduction in the number of tasks taught to new soldiers in initial training programs and (2) any increasing use of borrowed military personnel. These conditions have increased units' responsibility to provide training in basic skills while at the same time having fewer soldiers available to provide the training. Also, we are aware of concerns expressed by some military leaders, including representatives of some warfighting CINCs, that there are insufficient systems in place today to give warfighting CINCs meaningful assessments of joint readiness.

Q Each unified command is responsible for joint training. Discuss the trade offs between service and joint training. Discuss the special role USA Command will have with respect to joint training.

A My understanding is that the focus of much of the training to be provided by USACOM is going to be at the higher echelon battle staff, and is expected to make significant use of simulation capabilities. At the same time, today's contingency operations are calling for deployment of relatively smaller-size forces, this suggests that joint training is going to have to focus on a spectrum of potential contingency operations, small to large. We have previously reported that today's environment calls for closely examining training needs and priorities and assuring that resources are balanced between the classroom, simulations, training at various echelons, and

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field exercises, including those at the combat training centers. I would expand those comments to incorporate balancing joint training requirements. Exactly how this will be sorted out between service specific--technical and tactical training and training for joint operations remains to be seen. As a first step, I would suggest that the services and JCS need to have as firm a handle as possible on common recurring training weaknesses and ensure that their training programs are properly designed to deal with those problems. Such actions having been accomplished would seem to make it easier to make tradeoffs between service specific and joint training.

One of the big issues that the Joint Staff, CINCs, and services must deal with is the current system of allocating training resources--a system which allocates monies for training primarily through the services. The services face the dilemma of deciding how best to allocate their training funds between service specific and joint training. The Joint Staff has traditionally provided some funding for joint exercises but this largely has been related to funding transportation. So, this is an issue that remains to be sorted out.

Q. Are there criteria in place to measure adequately whether forces are prepared for joint operations? If so, what are they? If not, what would you recommend?

A. We are aware of concerns expressed by some military leaders, including representatives of some warfighting CINCs, that there are not systems in place today to give warfighting CINCs meaningful assessments of joint readiness. As discussed more fully in my response to your question on joint training, JCS first needs to develop training conditions and standards before it can fully assess joint readiness.

Q. The "Tiger Brigade" of the Army's 2nd Armored Division was attached to the 2nd Marine Division during the Gulf War. The Army and Marine Corps have different doctrines, the former, Airland Battle Doctrine, and the latter, Marine Air-Ground Task Force Doctrine. How did the two services integrate their doctrines in the Gulf? Have they developed "joint doctrine" consistent with their experience since the war? Have they conducted ground exercises? What lessons are there for the future with respect to joint training between the Army and Marine Corps?

A. Lessons learned reports from the services pointed out operational and doctrinal difficulties affecting each of the services from a joint perspective, as they operated in the Gulf--they affected but went beyond the relationship of the Army's Tiger Brigade with the 2nd Marine Division. With the Tiger Brigade and the Marine Division, logistics support for the Tiger Brigade was problematic since, according to one report, the Marine logistics system was not organized to support a modernized heavy brigade.

There were various reports of differences in operational concepts, terminology, and operating systems affecting each of the services, not just these two units. One Marine Corps lessons learned document pertaining to the Gulf War noted, for example, that the Marine Corps and the Navy commands don't staff actions the same way. It noted that their understanding of discussions, coordination, and concurrence are totally different.

More recently, a Marine Corps lessons learned report dealing with operations in Somalia noted the need for the Corps to continue to develop proficiency in the "operational art of interoperability." It went on to note that joint task force functions differ from traditional Marine Corps staff organizations. Similarly, an Army lessons learned report dealing with Somalia stated that "[t]he Joint community must commit to a thorough analysis of how best to form, train, and deploy a Joint Task Force headquarters. Essential to any JTF are fully qualified personnel with Joint experience" (emphasis in original source document).

Problems such as those noted above have led to service-specific and joint efforts to improve joint doctrine. The Army has updated its warfighting doctrine contained in FM 100-5 Operations, and includes an emphasis on joint operations. The Air Force and Navy have established doctrinal development organizations to focus on service specific as well as joint doctrinal issues. Likewise, the JCS has established a joint doctrine organization to foster development of joint doctrine. The JCS is in the process of issuing a number of joint publications addressing joint training and operations. However, much remains to be done in fully developing a joint training strategy.

Currently, there is no complete cataloging of all tasks that joint forces can be expected to perform, commonly referred to as a Universal Joint Task List. Subsequently, JCS needs to develop the training conditions and standards in order to conduct meaningful joint exercises and properly evaluate them. It may be several years before the JCS completes these efforts. As noted by the recent lessons learned from operations in Somalia, despite increasing recognition of the importance of joint operations and training, much remains to be done to achieve a true joint warfighting environment.

Simulation Technology

Q. Discuss the importance of managing computer simulation training in a cost-effective manner. Any indications it is not being managed in a cost-effective manner? If so, what specific recommendations would you offer to improve such management?

A. Computer simulations are growing in their importance and potential to enhance the

effectiveness and efficiency of training while reducing training-related costs. The lack of action to more clearly define the most appropriate mix of simulation and traditional training is an area where I think more needs to be done to assure simulation technology is managed in a cost-effective manner. The same is true of service efforts to provide guidance to trainers in the use of simulation technology.

With the trend toward increased use of simulation technology, there likely will be increasing desires to develop simulation centers at multiple locations within each of the services and to facilitate joint training. The need for such facilities could be offset somewhat through the use of evolving distributed interactive simulation technology that can be used to network and distribute training to multiple remote locations. Thus, in the future, I think DOD may need to take a hard look at newly planned simulation capabilities and facilities to make sure they aren't needlessly building new ones or developing too much redundancy.

Q. You indicate a problem in defining the most appropriate mix of computer simulated training and traditional field training. What is the problem? What are the services doing to address the problem? What specific recommendations would you offer to address the problem?

A. The problem appears to be one of limited efforts to identify potential trade offs between simulated and traditional training. We have reported on this situation as it affects the Army, but I don't have any reason to believe it won't affect each of the services more and more as use of computer simulation technology increases. I believe that limited efforts have been devoted to this issue out of concern that if tradeoffs are well defined, it could lead to efforts to reduce training budgets. I would argue, however, that pressures for reductions could come anyway, and that studies, designed to help define the right mix are key to defining and defending training requirements. In some instances, it may be more a matter of clearly identifying the training audience and training objectives for particular exercises, and determining the most effective approach to achieving those objectives, based on the known strengths and weaknesses of training methods, such as traditional field training versus computer simulated wargames. In other instances, it may be important to conduct special tests, involving the use of control groups, to fully assess the effectiveness of one type of training over the other, or what combination of the two is most effective. Therefore, I would recommend that the services conduct such studies, where necessary, to provide themselves with information needed to determine the most appropriate mix of training.

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Q. One of your reports on simulation management mentions the creation of the Defense Modeling and Simulation Office in the Office of the Secretary of Defense. Why was the office created? Describe the purpose, responsibility, and authority of the office. Has it been given adequate resources to do the job it has been assigned?

A. The Defense Modeling and Simulation Office (DMSO) was created in 1991 in response to the growing concerns about inadequacies in defense-wide coordination and guidance dealing with simulation activities. The need for a centralized coordinator also grew out of concerns about the uncoordinated proliferation of simulation systems. The Office is charged with providing guidance and coordination and fostering simulation networking across DOD and the military services. While DOD has repeatedly indicated its intention to provide permanent billets for this office, my understanding is that this office currently is being staffed with 9-10 persons on temporary loan from elsewhere in DOD and from the services; only one permanent position, that of the director, has been approved. This situation creates organizational instability, and raises questions in the minds of some as to DOD's commitment to the DMSO office and improving DOD-wide coordination in the simulation arena.

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